

WHAT IS CLAIMED IS:

1. An image forming apparatus comprising:  
image forming means for forming an image on an  
image bearing member;  
5        transfer means for electrostatically  
transferring the image on the image bearing member  
onto a transfer medium in a transfer portion, said  
transfer means including a transfer member that is  
capable of nipping the transfer medium in a space  
10        with the image bearing member and voltage application  
means for applying a voltage to said transfer member;  
control means for performing a detection  
operation that detects a voltage-current  
characteristic concerning said transfer member at the  
15        time of a non-transfer operation of said transfer  
means and determining a transfer voltage at the time  
of a transfer operation based on a detection result  
of the detection operation; and  
potential changing means that is capable of  
20        changing a potential of a surface of the image  
bearing member on which the image has been formed by  
said image forming means and which does not yet reach  
the transfer portion,  
wherein said control means performs the  
25        detection operation at the time when the image  
bearing member surface processed by said potential  
changing means passes through the transfer portion.

2. An image forming apparatus according to  
claim 1,

wherein said potential changing means comprises  
charging means before transfer for giving electric  
5 charges to the image on the image bearing member.

3. An image forming apparatus according to  
claim 1,

wherein said potential changing means comprises  
10 exposing means before transfer for exposing the image  
bearing member.

4. An image forming apparatus according to  
claim 1,

15 wherein said image forming means includes:  
charging means for charging the image bearing  
member;

latent image forming means for forming an  
electrostatic latent image by exposing the surface of  
20 the image bearing member charged by said charging  
means; and

developing means for developing an image  
portion of the electrostatic latent image on the  
image bearing member using toner.

25

5. An image forming apparatus according to  
claim 4,

wherein said control means performs the detection operation in a region of the image bearing member corresponding to a non-image portion.

5           6. An image forming apparatus according to claim 1,

          wherein said image forming means is capable of forming an image in a plurality of colors,

          said potential changing means selectively  
10 operates in accordance with a color of an image to be formed, and

          said control means performs the detection operation under a state where said potential changing means operates, and determines a transfer voltage for  
15 transferring an image, for which said potential changing means is to operate, based on a detection result of the detection operation.